



Contribution ID: 42

Type: **Experimental poster**

Enhancing the ME0 Level-1 Trigger in the CMS Experiment Using Machine Learning

The ME0 detector is a Gas Electron Multiplier (GEM) detector which will be installed as part of the phase-2 upgrade of the Compact Muon Solenoid (CMS) experiment in the Large Hadron Collider (LHC). ME0 is located in the endcap area of the CMS muon system. It is the only muon detector that covers $|\eta| > 2.4$. Due to the high background environment, keeping the trigger rate low while maintaining high efficiency is challenging. In this study, we aim to improve the performance of the Level-1 Trigger algorithm for ME0 - especially the trigger rate - by applying machine learning techniques.

Authors: LIAO, Hongbo (Chinese Academy of Sciences (CN)); HEO, Woohyeon (University of Seoul, Department of Physics (KR))

Presenter: HEO, Woohyeon (University of Seoul, Department of Physics (KR))